



THE COMMONWEALTH OF MASSACHUSETTS WATER RESOURCES COMMISSION

EIR Scope for Communities

Seeking Approval Under the Interbasin Transfer Act

TO JOIN THE MWRA WATER SUPPLY SYSTEM

This scope replaces the WRC application form (1986/1992) “*Application for Approval of an Action to Increase Over the Present Rate of Interbasin Transfer*” and is required for transfers considered “significant” under the Act. The information requested here should be incorporated into the EIR required by the MEPA regulations, 301 CMR 11.03. Wherever possible, the applicant should provide this information in an electronic format.

This scope is only for that portion of the EIR that pertains to the INTERBASIN TRANSFER ACT. There may be other issues which need to be addressed in the EIR for a particular project. The MEPA program should be contacted to determine a comprehensive scope.

The Interbasin Transfer Act governs the transfer of water and wastewater between river basins within the Commonwealth. Any water transferred out of a river basin, either for water supply or wastewater treatment purposes, is no longer available to replenish the “donor” basin’s rivers, aquifers, lakes or wetlands. The purpose of the Act is to assure that if an interbasin transfer does occur, the resources of the donor basin are not adversely impacted.

Admission to the MWRA, requires approval under the Interbasin Transfer Act. The following scope outlines the Interbasin Transfer Act issues to be addressed in the EIR for admission to the MWRA. Consultation with DCR’s Office of Water Resources (617-626-1366) is strongly recommended to tailor this scope to a specific proposal.

SUMMARY OF PROJECT

- Project Name
- Location
- Proponent Name, Address, Phone Number
- Primary Contact’s Name, Address, Phone Number, Fax Number, Email Address

DESCRIPTION OF THE PROPOSED INTERBASIN TRANSFER

- Describe and explain the reasons for the proposed interbasin transfer.
- Provide the approximate timetable for the proposed transfer, including the estimated commencement date and the estimated completion date.
- Where applicable, describe the existing transfer system, including out-of-basin conveyance capacity, storage capacity, withdrawal constraints or other limiting factors.
- Describe, in detail, the proposed interbasin transfer, including the maximum capacity, in millions of gallons per day (mgd) of the transfer facilities and the expected average daily transfer. Provide supporting information showing how the capacity of the conveyance was determined. Describe any proposed changes in existing structures and/or changes in operating rules of the water supplier or changes in transfer constraints.
- Describe the operating schedule of the proposed interbasin transfer, including the time periods, amounts to be transferred and the duration of the transfer.
- Provide the name, exact location and river basin of the source(s) of the proposed transfer of water, including the subbasin(s).
- List the communities, sections of communities, water districts or other areas that will use the water proposed to be transferred.
- Provide a precise description of the location, including river basin, of the wastewater discharge point.
- List the known users of this and associated resources, including agricultural operations and nurseries, whose use could be affected by the proposed transfer.
- Include a map of appropriate scale that clearly and accurately illustrates the information requested in this section. Wherever possible, MASSGIS data layers should be used.

OTHER PERMITS REQUIRED

- List the local, State or Federal agencies/commissions from which permits have been obtained or will be sought

INFORMATION NEEDED TO EVALUATE THIS PROJECT AGAINST THE SEVEN APPLICABLE CRITERIA OF THE INTERBASIN TRANSFER REGULATIONS, 313 CMR 4.05

Below, in **bold** the criteria for approval of an interbasin transfer are listed, as they appear in the regulations (313 CMR 4.05). In some cases, the WRC's interpretation of certain terminology appears in *italics*. Unless otherwise noted, the applicant must respond to all points listed under each criterion.

1. That an environmental review pursuant to M.G.L. c. 30, §§61 and 62H, inclusive, has been complied with for the proposed increase.

- Information needed for Interbasin Transfer review should be provided within the context of the EIR.
- Provide a copy of the ENF, including copies of comments received.
- When issued, provide a copy of the Secretary of Environmental Affairs certificate stating that the EIR properly complies with MEPA and its regulations.

2. That all reasonable efforts have been made to identify and develop all viable water supply sources in the receiving area of the proposed water supply interbasin transfer

Viable source means a source which can provide drinking water and meet the current water quality standards set by DEP, at a reasonable production cost compared to recently incurred costs for similar projects within the Commonwealth. Further, a viable source is one which can be used while maintaining a reasonable instream flow. Reasonable instream flow is evaluated by the same criteria as impacts on the donor basin. Receiving area is defined as the area which makes use of the water supply that has been transferred between basins.

Describe in detail the efforts made to identify and develop all viable sources in the receiving area. Discuss water supply alternatives considered, but rejected. State reasons for rejection. The discussion should include:

- Assessment of the development of abandoned (temporary or permanent), existing and potential in-basin water supply sources. Clearly and accurately locate these sources on a map of appropriate scale.
- Discuss and list studies and reports evaluating in-basin sources in the receiving area. Copies of studies should be made available upon request.
- Describe the costs of developing existing and proposed in-basin sources in the receiving area.
- If cost is a reason given for rejection of an inbasin source, compare these costs with the production costs recently incurred elsewhere in the Commonwealth for similar water supply sources. Refer to the Performance Standards from DCR's website:
<http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/finalps.pdf>.
- Describe the impact on in-basin streamflow that would result from the development of any viable in-basin sources in the receiving area. Refer to 313 CMR 4.05 (5)(a) through (j).
- Discuss the feasibility of obtaining additional water supply from water supply agencies in cities, towns or districts within the same basin as the receiving area. Are interconnections in place? If not, are such interconnections feasible?

3. That all practical measures to conserve water have been taken in the receiving area

- Provide an updated Water Conservation Questionnaire (available from DEP's Division of Watershed Permitting or at DEP's website: <http://www.state.ma.us/dep/brp/wtrm/files/con-wrc.doc>, or DCR's Office of Water Resources or at DCR's website:
<http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/consp.pdf>). If a Conservation Plan or Questionnaire is on file with DEP, provide a copy, updated to the present. Refer to Water Conservation Standards for the Commonwealth of Massachusetts (WRC, 2006) and the Interbasin Transfer Performance Standards (1999), both available from DCR's website:
<http://www.mass.gov/eea/agencies/dcr/water-res-protection/interbasin-transfer-act/>.
- Describe the current leak detection and system repair program. Discuss the methodology used (refer to the Interbasin Transfer Act Performance Standards, available from DCR's website:
<http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/finalps.pdf>). What was the date of the most recent leak detection survey? What is the date of the next scheduled leak detection survey?
- Describe the on-going meter installation, maintenance, and replacement program. State the

percentage of the system that is metered. Provide documentation of the annual master meter calibration program and a description of that program. Provide data to show that all permanent water supply services (including public buildings) in the receiving area are metered.

- Describe the amount of unaccounted-for water (in gallons and percent) in the receiving area for the past five (5) years. Refer to the Interbasin Transfer Act Performance Standards for the definition of “Unaccounted-for Water”. Describe on-going programs to reduce or keep the amount of unaccounted-for water at reasonable levels (less than 10%).
- Describe the current rate structure: (1) Does the rate structure reflect the cost of operation, proper maintenance, proposed capital improvements and water conservation. Does it encourage water conservation? If so, how? (2) Is the rate flat, increasing or decreasing? Is it charged according to water use, or some other method? (3) Are the funds dedicated in an enterprise account or is some other accounting procedure used? Describe. Refer to Appendix D of the Performance Standards.
- How often are customers billed? Is billing based on actual meter readings? Provide an example of the bill sent to customers.
- Provide the existing contingency plan(s) for adequately handling water supply emergencies, such as contamination of water supply sources or seasonal or drought related shortages of water supply. (See 313 CMR 4.02(4) for a definition of ‘contingency plan’.) Explain, if not stated in the plan, how and when water use will be curtailed, when trigger points require action, which water users will be reduced by what measures, and over what period of time, what emergency sources will be utilized, such as interconnections with nearby communities, reactivated sources or new emergency sources.
- Do all public buildings under the control of the proponent have low flow plumbing fixtures? Describe the types of fixtures in these buildings.
- When was the last audit of public facilities? Provide a copy of the report. Has a system-wide water audit ever been conducted? When? Provide a copy of the report.
- Describe any past or current programs to supply low flow plumbing fixtures to residential customers. What is the residential gallons per capita per day (gpcd) figure for the water supply system? What is the overall gpcd for the system? Provide the Annual Statistical Reports, required by DEP, for the past five years.
- If residential gpcd is greater than 65, describe the comprehensive residential water conservation program that is or will be implemented to reduce this use. If this program is not in place, describe the timetable for implementation. Refer to the Performance Standards.
- Describe the current and proposed public information programs to promote water conservation, the use of water conserving devices, and industrial and commercial recycling and reuse. These programs should include a program which identifies, ranks and works with all commercial, industrial and institutional customers according to amount used in order to determine areas where the greatest potential for water savings exists, should be in place. Are public education programs on-going or intermittent? Explain.
- Describe the measures in place to protect the water supply sources currently serving the receiving area that meet the requirements of the Department of Environmental Protection published in 310 CMR 22.20 and Wellhead Protection regulations 310 CMR 22.21. Include in this description all watershed or aquifer lands, even if not under the direct control of the water supply agencies.

- Is the plumbing code strictly enforced? By whom? Describe.

4. That a comprehensive forestry management program which balances water yields, wildlife habitat and natural beauty on watershed lands of surface water supply sources, presently serving the receiving area and under control of the proponent has been implemented.

- If the community does not have surface water sources, this criterion is not applicable. If the community does, describe existing and proposed watershed forestry management programs on watershed lands currently serving the receiving area and under the control of the proponent. Submit a copy of any applicable forestry watershed plans. Refer to the Interbasin Transfer Performance Standards for the information to be included in a Forestry Management Plan.

5. That reasonable instream flow in the river from which the water is transferred is maintained.

This part should describe the hydrologic characteristics of the river basins from which the water is to be diverted and any interdependent ground water regimens. The MWRA employs modeling tools to evaluate the impact of any withdrawals on the MWRA/DCR system and the impact on service to existing customer communities. Proponents are directed to work with MWRA, so that MWRA can provide appropriate documentation to respond to the requested information.

- Describe the proposed operating schedule for the interbasin transfer. This description should include variations throughout the seasons, the months, and the hours during a 24 hour period.
- Document that the safe yield of the MWRA watershed system is sufficient to meet the community's demands. This should evaluate the monthly performance of the Quabbin Reservoir over an extended period of years using observed hydrological data that includes the worst drought of record. It should also include an analysis of the impact of the community's demands together with the long-term demand of existing member communities during drought scenarios. The analysis must include the possibility of increased usage of MWRA supplies by partially supplied communities due to drought conditions. Impacts to service to other MWRA community connections under drought conditions and to MWRA supplies (including the Wachusett Reservoir) and the downstream environments must be evaluated. Provide the frequency or number of months that each MWRA reservoir level referenced in MWRA's Drought Management Plan is reached, beginning with the "Below Normal" stage under existing demands and with the addition of the proposed transfer.
- Provide graphs and tables that show the following:
 - (a) The historic monthly Quabbin Reservoir levels from 1990 to the present.
 - (b) On the graph, superimpose the resulting reservoir levels after the proposed withdrawal, had the community been an MWRA customer since 1990.
 - (c) On the table, show the Quabbin Reservoir levels which would have been realized had the proponent been an MWRA customer since 1990.
- Provide a table of the modelled uncontrolled releases (spills) from the Quabbin Reservoir from 1990 to the present including what the releases would have been with the theoretical demand of the community, had the community been an MWRA customer. Show any changes in the frequency and duration of uncontrolled releases that will occur with the addition of the community's proposed withdrawal.

- Provide information and data to demonstrate that the MWRA will be able to meet all of its mandated controlled flow releases with the addition of the proposed demand.
- If new member communities have been added to the MWRA Water Works system since 1990 or if there are other communities in the process of applying for membership, include the demands for these communities in the analyses required in this section.
- Provide a discussion of the operation of the Wachusett Reservoir. Will this additional withdrawal have an impact on the resources of the Nashua River basin? Describe.
- Analyze and evaluate, in detail, the impact of the proposed interbasin transfer on water-dependent uses including:
 - (1) Effect on the hydraulic characteristics in the stream below the point of withdrawal, including but not limited to flood flows, the aquatic base flow, the 7Q10 flow if used in a pollution abatement program, stage, velocity, sediment regimen, any flow values set for the donor basin by the WRC in DEM River Basin reports, etc.
 - (2) Effect on anadromous fisheries.
 - (3) Effect on resident fisheries.
 - (4) Effect on wetlands and dependent flora and fauna.
 - (5) Effects on water quality, recreational uses and aesthetic values, areas of critical environmental concern, areas protected under Article 97 of the Amendments to the Massachusetts Constitution, and designated scenic rivers.
 - (6) Effect on existing and planned future uses dependent on reservoir levels.
 - (7) Effect on hydropower production.
 - (8) Effect on present and foreseeable water-dependent uses within the donor basin.
 - (9) Effect on water use by agricultural operations, including nurseries.

6. In the case of groundwater withdrawals, the results of pumping tests will be used to indicate the impact of the proposed withdrawal on static water levels, the cone of depression, the potential impacts on adjacent wells and lake and pond levels, and the potential to affect instream values as listed in 313 CMR 4.05(5)(a) through (j).

This criterion is not applicable to MWRA's sources.

7. That the communities and districts in the receiving area have adopted or are actively engaged in developing a local water resources management plan.

- Provide the Local Water Resources Management Plan, or the draft plan under development and timeline for completion. Refer to the Interbasin Transfer Performance Standards for the information to be included in a Local Water Resources Management Plan.

8. The Commission shall consider the impacts of all past, authorized or proposed transfers on streamflows in the donor basin.

- List and describe the impact of all past, authorized and other proposed transfers on the streamflow in the donor basins.
- In addition, the WRC considers that the addition of a community to the MWRA Water Works System could have potential cumulative impacts on the system's operations. Provide

information to demonstrate that there will be no negative impacts to the operations of the MWRA Water Works System. The proponent should work with the MWRA to provide this documentation.

MITIGATION

- Describe any proposed flow augmentation provisions, flow protection thresholds, or other measures proposed to protect instream flow.

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Provide information to demonstrate that this proposal seeks to minimize unnecessary loss or depletion of environmental quality and resources.

Electronic copies (unless otherwise specified) of all Interbasin Transfer EIRs should be sent to the following people. This is only a listing of those people who will be reviewing the EIR specifically under the Interbasin Transfer Act and is not meant to be all inclusive.

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